

SYSTEMATIC REVIEW

Barriers and Facilitators to Physical Activity and Exercise Among Individuals With Spinal Cord Injury: A Systematic Review

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ABSTRACT

Introduction: This study aimed to systematically conclude the barriers and facilitators of physical activity (PA) after spinal cord injury (SCI). **Methods:** A search was conducted involving literature from 2010 until 2021 using health-related online databases such as PubMed Central, MedLine, SCOPUS, and Web of Science. The initial screening found 788 articles, but only four studies were included in the review after assessing the duplicates, titles, and abstracts. Pain, lack of motivation, knowledge and skills to do PA are the main internal barriers to PA, while cost, lack of facilities and support are the external barriers to PA. Perceived benefits of PA and accessibility are the main facilitators of PA after SCI. **Results:** The findings of this review highlighted the challenges in promoting participation in PA among individuals with SCI. **Conclusion:** A multidisciplinary approach may be required to develop strategies and make decisions to enhance long term participation in PA among individuals with SCI.

Malaysian Journal of Medicine and Health Sciences (2022) 18(8):365-373. doi:10.47836/mjmhs18.8.46

Keywords: Barriers, Facilitators, Physical activity, Spinal cord injury, Paralysis

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INTRODUCTION

Individuals with spinal cord injury (SCI) are prone to develop secondary complications such as cardiovascular diseases, diabetes mellitus (DM), pressure sores, low physical fitness [1], fatigue [2], and obesity [3] as a result of increased sedentary time following the injury. SCI may result in full or partial paralysis that may restrict participation in physical activity (PA). This is also attributable to the loss of sensation and control of the Autonomic Nervous System (ANS) such as blood pressure regulation, thermoregulation, bowel, and

bladder routine [4] that may predispose individuals to difficulty in PA participation. PA can be defined as any bodily movement produced by skeletal muscles which results in energy expenditure above the resting level [5], including any types of activity such as household, indoor and outdoor chores, walking, cycling, shopping, sports, intentional exercises, and other activities of daily living or other recreational activities.

Previous studies have shown a low level of PA among individuals with SCI, particularly after being discharged from a rehabilitation [6] or therapy program [7]. Individuals with SCI were also in low compliance with exercise recommended guidelines [8,9]. A meta-synthesis [10] and systematic review (SR) [11] studies found several barriers and facilitators towards PA including general well-being, environment, physical capacity, body-self relationship, knowledge, and